Amendment to the Claims:

1. (Cancelled)

2. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim [[1]] 7, wherein the value of the glass temperature is at least 30 °C.

3. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim [[1]] 7, wherein the temperature-influencing means comprise:

a heating ~~means~~ unit ~~for the gradient coil system~~ which wupplies heated fluid to the mixing valve; and,

a cooling unit which supplies cooled fluid to the mixing valve.

4. (Currently Amended) ~~An~~ A magnetic resonance imaging (MRI) apparatus ~~as claimed in claim 1~~ comprising:

a main magnet system for generating a main magnetic field in an examination space;

a gradient coil system which is substantially situated between the main magnet system and the examination space and which is provided with sub-gradient coils and a binding material having a glass temperature for keeping the sub-gradient coils together;

control means for controlling the temperature of the gradient coil system; and

temperature-influencing means for influencing, on the basis of control signals originating from the control means, the temperature of the gradient coil system;

wherein the control means are arranged for controlling, during operation of the MRI apparatus, the temperature of the binding material of the gradient coil system to a value above the glass temperature; and,

wherein the temperature-influencing means and the control means are arranged so as to be able to influence, to a different degree, the temperature of respective, different parts of the gradient coil system.

5. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim [[1]] 4, wherein the temperature-influencing means comprise a fluid circuit which extends through the gradient coil system to exchange energy between the fluid in the circuit and the binder material of the gradient coil system.

6. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim 5, wherein the fluid circuit comprises two separate circuit parts.

7. (Currently Amended) ~~An~~ A magnetic resonance imaging (MRI) apparatus ~~as claimed in claim 6~~ comprising:

a main magnet system for generating a main magnetic field in an examination space;

a gradient coil system which is substantially situated between the main magnet system and the examination space and which is provided with sub-gradient coils and a binding material having a glass temperature for keeping the sub-gradient coils together;

control unit for controlling the temperature of the gradient coil system; and

temperature-influencing unit for influencing, on the basis of control signals originating from the control unit, the temperature of the gradient coil system;

wherein the control unit is arranged for controlling, during operation of the MRI apparatus, the temperature of the binding material of the gradient coil system to a value above the glass temperature;

wherein the temperature-influencing unit comprises a fluid circuit which extends through the gradient coil system to exchange energy between the fluid in the circuit and the binder material of the gradient coil system; and,

wherein the fluid circuit comprises two separate circuit parts, the separate circuit parts meeting in a joint circuit part upstream of the gradient coil system via a controllable mixing valve, the position of the mixing valve being dependent on control signals from the control ~~means~~ unit.

8. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim 6, wherein the separate circuit parts extend through different parts of the gradient coil system.

9. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim 8, wherein one of the two circuit parts is provided primarily to influence the temperature of one or a number of sub-gradient coils, while the other of the two circuit parts is provided primarily to influence the temperature of the binding agent.

10. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim 6, wherein the temperature-influencing means and the control means are arranged for controlling the capacity of the separate circuit parts independently of one another.

11. (Currently Amended) ~~An~~ A magnetic resonance imaging (MRI) apparatus ~~as claimed in claim 1 wherein~~ comprising:

a main magnet system for generating a main magnetic field in an examination space;

a gradient coil system which is substantially situated between the main magnet system and the examination space and which is provided with sub-gradient coils and a binding material having a glass temperature for keeping the sub-gradient coils together;

temperature-influencing unit which influences the temperature of the gradient coil system; and

a ~~the~~ control ~~means are~~ unit arranged for controlling, on the basis of data regarding the ~~necessary~~ projected energy consumption by the gradient coil system for an image yet to be made by the MRI apparatus, the operation of the temperature-influencing ~~means~~ unit before or during the production of this image to control the temperature of the binding material of the gradient coil system to a value above the glass temperature.

12. (Currently Amended) ~~An~~ The MRI apparatus as claimed in claim [[3]] 4, wherein the ~~heating~~ temperature-influencing means comprise:

electrical resistance wires in the binder material to heat the binder material.

13. (Currently Amended) A method of operating a magnetic resistance imaging (MRI) apparatus comprising a main magnet system for generating a main magnetic field in an examination space, a gradient coil system which is situated basically between the main magnet system and the examination space and which is provided with sub-gradient coils and a binder material with a glass temperature for keeping the sub-gradient coils together, a control ~~means for controlling~~ unit which controls the temperature of the gradient coil system and temperature-influencing ~~means for influencing~~ unit which influences the temperature of the gradient coil system on the basis of control signals originating from the control means, ~~wherein,~~ the method comprising:

during operation of the MRI apparatus, ~~the control means~~ controlling to a different degree the temperature of the binder material of different parts of the gradient coil system to ~~a value~~ temperatures above the glass temperature.

14. (New) The method as claimed in claim 13, further including:

electrically heating the binder material to increase temperature and fluidicly cooling the binder material to reduce temperature.

15. (New) The method as claimed in claim 13, wherein the temperature-influencing unit includes a plurality of fluid circuit parts extending through each of a plurality of portions of the gradient coil system and wherein the method includes:

supplying different temperatures of fluid to different fluid circuit parts to control the temperature of the binder differently in different parts of the gradient coil system independently.

16. (New) The method as claimed in claim 13, further including:

determining energy consumption by the gradient coil system for an MRI procedure to be conducted;

controlling the temperature of the binder material in accordance with the determined energy consumption before as well as during the conducting of the MRI procedure.

17. (New) The MRI apparatus as claimed in claim 11, wherein the temperature-influencing unit and the control unit are arranged to influence the temperature of different parts of the gradient coil system to a different degree.

18. (New) The MRI apparatus as claimed in claim 11, wherein the temperature-influencing unit further includes:

a fluid circuit including a fluid circuit part which extends through the gradient coil system;

a mixing valve connected with the fluid circuit part that extends through the gradient coil system;

a heating unit which supplies heated fluid to the mixing valve; and

a cooling unit which supplies cooled fluid to the mixing valve.

19. (New) The MRI apparatus as claimed in claim 11, wherein the temperature-influencing unit includes:

electrical resistance heating elements disposed in the binder material; and

a fluid circuit extending through the gradient coil system for circulating a temperature control fluid through the gradient coil system.

20. (New) The MRI apparatus as claimed in claim 12, further including:

a fluid circuit including a cooling unit, the fluid circuit extending through the gradient coil system to cool the binder material.